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# **General meeting: November 15**

Our meeting is at the clubhouse at 7 pm on November 15. If you want to attend, please sign up by emailing Sandra before the meeting. If you have not yet done so, you will need to show proof of vaccination before entering the building.

## Winter bazaar - Dec. 11 & 12

The Winter bazaar is coming soon! You can shop for holiday gifts without the worry of encountering supply-chain delays. All guests must properly wear a mask and have no fever when their temperature is taken with



a skin-touch thermometer. Questions? Contact Eric Adams 206-940-1949.

The bazaar will be open

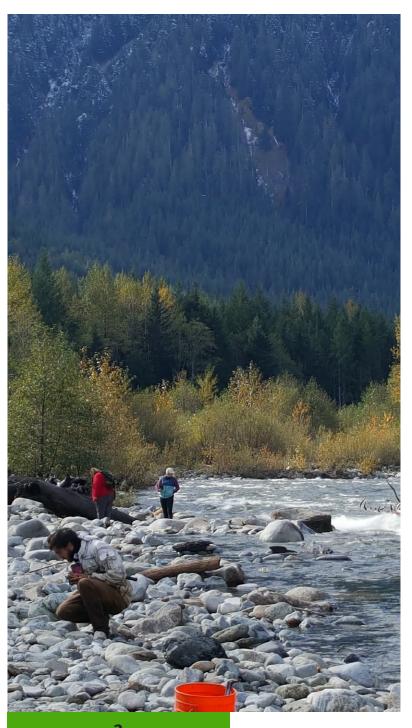
Saturday, Dec. 11th from 9 am - 5 pm Sunday, Dec. 12th from 10 am - 5 pm

# **Banner photo**

The image at the top is "Mystic Topaz" by Mark Somma. We have republished the photo here under the Creative Commons license BY 2.0.

# Field trips

Questions? Email Ed Lehman at wsmced2@outlook.com or call him at (425) 334-6282 or (425) 760-2786.



#### November 13th at 9 am

Meet: Take I-5 exit #240 and go toward Blanchard Hill. Meet at the Shell Gas Station by the exit. Looking for: Dalmation stone



Dalmation Stone, a type of jasper by <u>Sue Corbisez</u> License: CC BY 3.0

## Why do you collect rocks?

by Lillian Haddock (1975)

There is a bit of the "true believer" in very Rockhound, the secret hope that today is the day to find the greatest treasure of all.

All Rockhounds are spiritual descendants of the Mother Lode seekers, and as such, we must keep on hunting.

# **November Birthdays**

Happy birthday to everyone born in November. You are fortunate to have two birthstones: topaz and citrine.

In ancient times yellow gems were mined on the island of Topázios, now called St. John's Island in the Red Sea. Yellow gems came to be



Topaz earrings by Starbright

known as topaz. Scientists now think that rather than topaz, the gems mined on the island were chrysolite (yellow olivine). Up through the Middle Ages, any yellow gemstone was called topaz.

In the Middle Ages superstitions were wild. People were afraid of curses and thought that if someone bound a topaz to their left arm, they would be protected from the evil eye. They also thought that wearing topaz increased your body temperature which would fend off a cold or fever. A person's mental powers would be strengthened, they believed, by wearing topaz.

Earlier than the Middle Ages in England people believed topaz could cure lunacy. To protect themselves, Roman soldiers and traders carried topaz when travelling.

Today topaz is a symbol of friendship.



Citrine crystals by Lovestruck
Creative Commons license BY-NC 2.0

#### **Topaz basics**

Category: Nesosilicate

minerals

Formula: Al<sub>2</sub>SiO<sub>4</sub>(F,OH)<sub>2</sub>

Crystal system: orthorhombic

Crystal class: Dipyramidal

(3m)

Crystal habit: Prismatic

crystal

Color: colorless, white, blue, brown, orange, gray, yellow, yellowish brown, green, pink, red

Cleavage: perfect

Fracture: Subconchoidal

to uneven

Mohs: 8.0

Luster: vitreous

Streak: white

Diaphaneity: transparent

Specific gravity: 3.49–3.57

Refractive index:

 $n_a = 1.606 - 1.629$ 

 $n_{\beta} = 1.609 - 1.631$ 

 $n_v^{\beta} = 1.616 - 1.638$ 

Pleochroism: Weak in thick sections X = yellow; Y = yellow, violet, reddish; Z = violet, bluish, yellow, pink

Ultraviolet fluorescence: Short UV=golden yellow; Long UV=cream

## Mystic topaz





The rainbow effect in mystic topaz is created by coating colorless topaz with a thin film of a substance that reflects multiple colors, especially green, yellow, blue, and purple.

The coating is applied with thin-film deposition, a process that places thin layers of a coating material, usually a metal, on the gemstone. Each layer is a single atom or molecule thick.

To lay down such a thin coating, the material is vaporized in a vacuum chamber where the cut topaz lies upside down (pavilion side up). The vaporized metal settles on the pavilion and chemically bonds to the gemstone. This process is also used to make dichroic glass.



By coating the pavilion, they gain two advantages. First, the bottom or back side of the gemstone is more

protected from scratches than the crown. Second, light enters the clear topaz through the face and refracts off the coating, creating a dazzling rainbow of colors.

Because the visual effect is generated by a treatment to the surface of a colorless gem, mystic topaz is not a type of topaz, but rather colorless topaz with a treatment.





Mystic topaz and peridot earrings by Indien-Schmuckkunst License: CC BY-NC-ND 2.0

## **Ostro Stone**

The Ostro Stone, which is the largest topaz ever found, is a flawless blue topaz weighing 9,381 carats (almost 2 kg). This gem was discovered by Max Ostro in the Amazon rain forest in the 1980's.

Max and his family were Polish and in 1943 the Nazi's sent them to the death camp at Treblinka. Max's parents understond the danger that lay ahead and told Max and his brother Chanina Aharon to jump from the train at night when the Nazi sharpshooters might not see them. Chanina was killed and Max survived even though he suffered a head injury and developed typhoid.



Ostro Stone - 9,381 carats (over 2 kg), topaz Minas Gerais, Brazil by Hans Hillewaert, CC BY-NC-ND 2.0

Unfortunately, Max was caught later and was sent to a labor camp where he spent 18 months. He escaped just before he was scheduled to be transferred to Auschwitz.

A friend helped him hide, but he was nearly captured in an SS raid. After that he hid in a grave for 6 weeks during the bitter winter of 1944. He had a small hole for air and potatoes to eat. Finally, the Nazis were defeated, and Max returned home. Sadly, the rest of his family did not survive, and his family's home was occupied by another family.

Max went into business with the few possessions he owned, and over time he became quite successful. After Poland's communist government confiscated all his wealth, he emigrated to South America. He travelled all over his new continent in search of gemstones. His adventures included fighting off malaria and piranhas.

When mining near the Amazon River, he found that if he dug too close, the river could suddenly flood the mine with water and piranhas, which could strip a person down to the bones in minutes.

Max passed away in 2010, age 84, and his son, Maurice Samuel Ostro took over running Ostro Minerals, with a change in direction. Now, the <u>Ostro</u> company is focused on supporting arts, interfaith, and economic development projects. As part of this mission, Maurice arranged for the Ostro Stone to be on permanent loan to London's <u>Natural History Museum</u>, where you can see it on display.



Blue topaz with lepidolite Virgem da Lapa, Jequitinhonha Valley, Minas Gerais, Brazil by Géry Parent, CC BY-ND 2.0



Pink topaz by <u>Luis Hoyos</u> Gilgut Skardu, Pakistan by Luis Hoyos, <u>CC BY-NC-ND 2.0</u>



Violet Topaz Minas Gerais, Brazi by Thisisbossi, CC BY-SA 2.0

# **Rainbow of Topaz**

Pink topaz is predominantly mined in Northwestern Pakistan. The pinks vary in hue, and the most popular one is cyclamen pink which has a hint of violet.

Yellow, orange, red, pink, and violet topaz have been

mined in the Brazilian state of Minas Gerais for over 200 years. The town nearby the mines is Ouro Preto, which is a UNESCO world heritage site.

In Argentina and at the Topaz Mountain in Utah topaz forms in vapor cavities in rhyolite lava flows.

Colorless and light blue topaz are found in Precambrian granite in Mason County, Texas.



Brown topaz, muscovite, quartz Haramosh Mountains, Pakistan by Géry Parent, CC BY-ND 2.0



Imperial Topaz by Portang, CC BY-NC-ND 2.0



Sherry colored topaz from Maynard's Claim in Utah by Rob Lavinsky, <u>iRocks.com</u> License: CC BY-SA 3.0



Imperial topaz f rom Minas Gerais, Brazil by <u>Géry Parent</u> License: CC BY 2.0

# **Juniors - Rock Cycle**

Rocks form, then slowly break down, until pieces of them are reformed into new rocks over tens of thousands of years. That is the rock cycle. As pieces of a rock are worn down (also called, *eroded*) or chipped away, the bits travel to scattered new locations. Along the way they mix with pieces from other rocks. Much later those mixed bits of rock might be formed into new rock.



## Chips and bits

**Water** — It is hard to imagine how a rock could be eroded or broken down, but it happens! Erosion from wind and water very slowly wears tiny bits off the outside of a rock. Have you stood under a waterfall in a river or at a water park? The water pounds your body if it falls several feet. Water erodes by directly hitting a rock day after day, year after year. Also, powerful currents push rocks making them knock into other rocks causing chips to fall.

**Wind** — Wind pushes against the surface of a rock loosening the outer layer. Gales

can send one rock crashing into another. Little by little, wind erodes rock.

#### **Erosion?**

When something erodes, it slowly wears away bit by bit. Most erosion is caused by water and wind.

Have you built a sand castle on the beach? Sometimes it is fun to slowly pour water over a sand tower and watch the water erode the castle away. Sometimes it's sad to see the incoming waves lapping at the base of your tower and eventually eroding your castle away. Sandcastles are not hard like rocks, so they quickly erode. A few good waves wouldn't erode a real rock into bits.



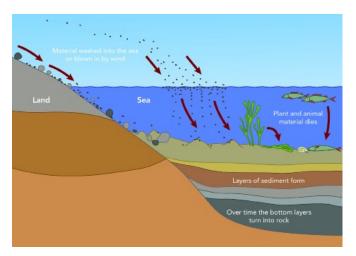
**Plants** — As trees and shrubs grow on top of a rock, their roots push into cracks. Over time the roots get longer and wider and this makes them push sideways and deeper into the rock making it crack. Rain seeps into those cracks and freezes in winter. Ice takes up more space than water,

so freezing causes sideways pressure on the crevices. Each time the rock cracks, tiny chips and bits are probably breaking away from the rock.

**People** — Rockhounders, construction workers, and others help break down rocks when they use picks to collect pieces of rock, drill into basalt to anchor a suspension bridge, or grind a rock under a hiking boot.



# Juniors - Rock Cycle (continued)



Formation of sedimentary rock by Siyavula Education; License: CC BY 2.0

#### **Transportation**

Have you thrown a stick in a creek and watched it being transported downstream? Flowing water pushes on everything it encounters, including sticks and bits of eroded rocks. Those chips and bits of eroded rock are also transported by wind and animals, including people, of course. After walking out in nature have you noticed that sand and tiny pebbles became stuck in the tread on the bottom of your shoes? If so, you have provided transportation for eroded rocks.

## **Compression?**

Compression is pressure that packs something down which gets rid of large air pockets and makes the pieces touch each other. Most sedimentary rock is formed with compression.

Have you ever made cookies with brown sugar? Often, in the sugar bin the brown sugar is loose. To measure the sugar you compress it into the measuring cup. When the cup is full, you can turn the measuring cup upside down and a lump of brown sugar falls out in the shape of the measuring cup. The sugar is holding the compressed shape, like a sedimentary rock.

#### From old to new rocks

There are three types of rocks: sedimentary, igneous, and metamorphic. Each type is created in a different way.

#### Sedimentary

These rocks form after many layers of rock pieces build up as sediment. The weight of it compresses the lower layers. Water infuses the sediment



with minerals that glue the rock together. After thousands of years, sedimentary rock is formed.

**Igneous** — These rocks are made by volcanoes. Lava cools to form basalt, obsidian, pumice, and other rocks.

**Metamorphic** — When a rock changes from one type of rock into another type due to intense pressure or heat, the resulting rock is metamorphic.

## Maplewood membership

While the world around us seems in a state of confusion, we have the unique opportunity of having a nice place to meet with friends that we enjoy and the harmony of fellowship.

~ Merle DeGarmo, President 1974

# Buy grit for your rock tumbler

Contact Sandra to buy grit: ask.sandra@yahoo.com



## Donate to the club

Our club is a 501(c)(3) organization, so if you itemize deductions, you might receive a tax deduction. Ask your tax expert.

Checks can be made out to MRGC if you don't want your hand to cramp from writing the entire club name, Maplewood Rock and Gem Club. The club address is

8802 196th Street SW Edmonds, WA 98026

## Nature's magic

Lapidary is an art, mineralogy is a science, and collecting is — collecting.

What do they have in common? The love of nature and natural beauty, the desire to explore and find the treasures of the earth.

There is magic in an agate as surely as in an emerald.

~ Lillian Haddock 1975



## **Facebook**

Our <u>facebook page</u> has up to date information about what is happening at our club. When we have online auctions, they happen on our page.

We also have a Facebook group —  $\underline{\mathsf{MRGC}}$  Sales and  $\underline{\mathsf{Trades}}$  — which is open to members of our club.

# **Board meeting**

If you have questions for the board or if you'd like to attend a meeting, please email our Board President, Sandra: ask.sandra@yahoo.com

## Connect with us

Website: <a href="http://www.maplewoodrockclub.com/">http://www.maplewoodrockclub.com/</a>

Facebook page: Maplewood Rock & Gem Club

Facebook group for members: MRGC Sales and Trades

Address: 8802 196th St SW, Edmonds, Washington 98026

#### Washington State Mineral Council

Our club, along with many other rock and gem clubs in the state, is a member of the Washington State Mineral Council.

This organization helps us by

- advocating for access to public lands
- advocating for beneficial land use policies
- compiling and sharing maps and other information
- publicizing shows and field trips so members learn about and can participate in events at other clubs

Read their latest Newsletter.



# Image license attributions

We use abbreviations in the license attributions. Here are the definitions.

CC: Creative Commons license

BY: attribute the author, link to the license, and indicate if changes were made.

SA: share alike - If you publish the image, you must use the same license.

ND: no derivatives - You may not alter the image.

NC: non-commercial use - You may not use the image for commercial use.

3.0 or other number: version of the license

## Sister club in Australia

Our sister club in Australia is the Atherton-Tableland Mineral & Lapidary Club in Tolga, Queensland. Connect to them on Facebook:

www.facebook.com/groups/197340266987276

One hundred million years ago the eastern edge of the Australian continent extended much farther to the east. Tectonic forces broke off and submerged into the ocean the eastern section while a rising mantle caused the remaining land to lift.

Beginning 4 million years ago large basalt flows filled river valleys and formed a relatively flat landscape. Following that period the volcanoes became more gaseous spewing lava in violent eruptions. This landscape is now called the Atherton Tablelands. You can learn more on Wikipedia.



#### This issue

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# News to share? A suggestion? A correction?

Please send news ideas and images you'd like to share to the newsletter editor, Nancy Samuels at <a href="mailto:mrgc@nancysamuels.com">mrgc@nancysamuels.com</a>.